

## Inventory Management versus PAR Replenishment?

Stock-outs, Overstocking and Waste Mean Something's Missing in the Current Approach

### Premise

Nearly every hospital in America has invested in an Enterprise Resource Planning (ERP) system and implemented business processes to support inventory management. Yet hospitals still report continual stock-outs, overstocking, hoarding, waste, maverick spending and high labor costs. Why does this gap between business process, technology and actual results still exist? Because most hospitals aren't doing inventory management. Instead, they're practicing "PAR Replenishment."

### What is PAR?

PAR stands for "Periodic Automatic Replenishment." At a basic level, a PAR system works like this:

- PAR is amount of an item you plan to have on hand. PAR levels are set based on the minimum amount of the item required to meet demand for a given period, such as a day or a week.
- Every time an item is withdrawn from inventory, the bar code is scanned.
- When an item falls below the PAR level, it is reordered to get it back above PAR.
- Organizations typically use historical data to set PAR. For example, if a hospital wants to keep a three-day supply of an item on-hand, they look at a year's use of that item and use average daily use multiplied by three for PAR.

Using a PAR system is simple in principle, but there are challenges including the ongoing accuracy of data, staff expertise and labor to manage it.


### The Challenge of PAR

PAR systems are "perpetual" in nature; on an on-going basis, a requirement of PAR is that each item is recorded as it is removed from the shelf, either by bar code scanning, RFID or pen and paper. In the real world, this method is difficult for hospitals to manage continuously. To overcome the challenge of recording every individual item, hospitals often use the established PAR level to simply "replenish" items without counting, based on an estimate of the number of units remaining. The problems with this replenishment method are several:

- 1) A hospital generally will not know its true inventory levels
- 2) Hospitals often set PAR but don't go back to reanalyze the levels based on updated data
- 3) Using a replenishment approach places inventory decisions in the hands of supply technicians, with varying degrees of expertise

### PAR Replenishment

Once PAR levels are set for all items stocked in the hospital, a supply technician goes at scheduled intervals to each store room or supply area and does a visual review of the supplies. An experienced technician doesn't actually count all the supplies on the shelf, though, which would be enormously time-consuming given how many products are on-hand. Instead, they do a visual assessment and check to see what appears low, based on their experience with the items. Based on their estimation of current levels, supplies will be replenished.



If an item has PAR level set at 10 and is currently at 11, but the technician thinks the supply looks low, he or she may report it at nine to trigger a reorder to avoid a stock-out. Done over and over again, and across a wide range of supplies, the end result becomes inaccurate velocity reporting. The outcome is overstocking, stock-outs, waste and higher costs.

While PAR remains one of the most commonly used methods of inventory management, and has some advantages in concept, it is highly dependent on the experience of the supply technician, historical data, accuracy of actual product velocity, and can be less effective for certain types of supplies or areas of the hospital.

Some of the additional challenges of PAR:

- 1) With so much reliance on the expertise of the supply technician, a new technician coming on board can cause negative impacts in the system.
- 2) With most current inventory management systems, adjusting PAR levels across the organization is difficult and time-consuming.

### **Cycle Counting**

Cycle counting can help improve accuracy and supplement a PAR approach. Using an algorithm that considers high- and low-frequency use items, cycle counting directs supply technicians to perform a physical count of specific items in a specific area of the hospital. High velocity items are counted more frequently than low velocity items. Directed cycle counting helps determine with greater accuracy how fast specific items are actually being used. Over an established period of time, cycle counting ensures every item in an organization is counted so actual inventory is reported.

### **Is Your PAR Approach Actually Working?**

If you're using PAR for supply replenishment and not as an actual inventory management program, it's not going to eliminate the problems your organization experiences, such as stock-outs, overstocking and waste.

For items needing a perpetual count of what's in stock, PAR works reasonably well when combined with cycle counting, but it must be continually reanalyzed and balanced with current data. To improve results, PAR can be used in some areas but combined with other inventory management approaches such as 2Bin, limited access cabinets, RFID or other systems, depending on the requirements of a given department or area.

### **Which Approach Should You Use?**


In each area of the hospital, using the right approach helps improve and streamline processes, reduce costs and labor, and increase nursing satisfaction. But you must have an infrastructure that ties each of these processes together to gain visibility to supplies used and item velocity in every location. The options include:

- 1) A PAR approach, which requires product barcodes be scanned individually when taken from inventory to be consumed. PAR tends to work well for more expensive, lower velocity items and is useful for products tracked specifically to a patient.

PAR level settings for each product need to be based on accurate historical data, then continuously updated based on current measurements. Ongoing tracking of and visibility to product use across areas and floors of the hospital is needed to continually make recommendations and adjustments to PAR.

- 2) 2Bin (also known as Kanban) systems are rapidly gaining in popularity in hospitals, especially in areas where the clinical team must quickly obtain supplies they need and don't have time to scan individual items.

The 2Bin approach is based on a very simple concept: each item in a hospital's inventory is placed in two separate bins, placed end to end on a shelf. The two bins combined contain the total amount of inventory required for the days of supply a department or unit plans to keep on hand.



Throughout the day, staff members take what they need from the bins. When a bin is empty it is placed on the top shelf and the next bin pulled forward.

At specified times, supply technicians scan the barcodes on the empty bins and submit the order to refill the empty bins, based on reorder levels an organization has established in the system. No individual item scanning is required in 2Bin systems and it's proving effective for high velocity, low cost items.

- 3) A limited access or locked cabinet system may be used when dealing with items or devices that require controlled access and distribution. Often these systems are called upon to manage pharmaceutical products. Items stored in these systems may be expensive, controlled by prescription, need to be tracked as individual items, or are removed from an inventory location for a specific patient and immediately assigned to that patient.

- 4) RFID storage unit systems are often used with implantable devices and other implantables like human tissues, cells and synthetic grafts to capture and document the implant data records with supply chain information systems. These systems help integrate regulatory compliance and product recall tracking with inventory management.

#### Select a Smart System Infrastructure

To eliminate stock-outs and overstocking, look at today's smarter cloud- and mobile-based systems, and select one that supports all of the inventory management approaches you implement. These systems are easily implemented and quickly adopted by your staff, and provide exceptional reporting capabilities. With smart and actionable reporting that covers your entire system, you can make the right business decisions to avoid stock-outs, overstocking, hoarding and waste, and reduce significant costs through more effective inventory management.



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